

REMARKS

Through this response, no claims have been amended. Claims 1-25 and 30-48 are currently pending in the application. Applicants acknowledge with appreciation the withdrawal of the objections to claims 45 and 46 as well as the withdrawal of the double patenting rejections set forth in previous office action. The Examiner is respectfully asked to reconsider the outstanding rejections in light of the remarks set forth below.

Election/Restriction

Applicants note that the Examiner maintained and made final the election of species requirement of (1) white mineral oils for the fatty phase and (4) sorbitan monooleate for the nonionic surfactant in the previous office action. It is Applicant's understanding that should the Examiner find the elected species allowable, the Examiner would then expand the search to include additional species of fatty phases and nonionic surfactants.

35 U.S.C. § 103(a) Rejections

35 U.S.C. § 103(a) states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-25 and 31-48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brancq et al. (U.S. Patent No. 5,422,109), in view of Balassa (U.S. Patent No. 3,780,195), Shechmeister et al. (U.S. Patent No. 3,925,544) and van Slyke (U.S. Patent No. 5,780,407).

In the outstanding office action, in responding to Applicants' previous arguments, the Examiner refers to Shechmeister et al., column 3, lines 47-51, which indicates the presence of sodium alginate in the amount of 4 percent weight/volume and 0.67 percent by weight calcium gluconate. (Office Action, pages 2-3, ¶ 3.) In addition, in the body of the rejection, the Examiner states:

It is noted that concentration of metal cations [C], expressed in mol/liter, for calcium gluconate is calculated to be 1.56×10^{-2} mol/liter. Additionally, the ratio of the concentration of anionic polymer [P]/[C] is calculated to be 5.97. Furthermore, the concentration of sodium alginate and calcium gluconate is sufficient to precipitate as an insoluble alginate gel before injection (column 3, lines 4-45).

(Office Action, paragraph bridging pages 4-5.) However, Applicants are unable to reproduce these calculations, specifically with respect to the concentration of anionic polymer.

The Examiner calculates the [P]/[C] ratio to be 5.97, which means that the concentration of anionic polymer would have to be 9.31×10^{-2} ([P]= $5.97 \times [1.56 \times 10^{-2}]$). Applicants are unable to determine how the Examiner obtained this number for the anionic polymer concentration. Applicants have calculated the [P]/[C] ratio in Shechmeister et al. to be 2564, where [P]=4 and [C]= 1.56×10^{-2} . This is consistent with the instant specification, paragraphs [021] and [027], which state that the concentration of metal cations [C] is expressed in mols per liter, and that the concentration of anionic polymer [P] is expressed as a percentage by weight of solution.

This large [P]/[C] ratio is also consistent with the teaching of Shechmeister that, “[t]he vaccine should not, however, contain calcium or other insolubilizing ions of a concentration sufficient to precipitate as an insoluble alginate get[sic] before injection of the vaccine into animals is made.” (U.S. Patent No. 3,925,544, col. 3, lines 42-46). [Emphasis Added]. Indeed, the large ratio indicates that the concentration of anionic polymer far exceeds the concentration of metal cations present in the composition. Thus, the amount of calcium present in Schechmeister is insufficient to form the organometallic gel as required in the present claims.

Further, as can be seen in the examples of the instant application, the concentration of metal cation used is 500 millimolar, see, e.g., paragraphs [052] and [057] of the specification, where the concentration of anionic polymer is 1% and 3.5% by weight, respectively in paragraphs [051] and [056]. This is in stark contrast to the concentration of calcium used in Shechmeister, which is only 15.6 millimolar with 4% anionic polymer by weight. This also illustrates the large difference in metal cation concentration between the instant invention and the prior art and reinforces the requirement in Schechmeister that the amount of metal cations is insufficient to form a gel.

Therefore, contrary to the Examiner’s assertion, Shechmeister teaches away from the use of organometallic gels, specifically discouraging their use. A prior art reference must be

considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). [emphasis in original], M.P.E.P. § 2141.02(VI), *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

The disclosures of Balassa and Van Slyke fail to make up for the deficiencies of Brancq et al. in view of Shechmeister et al. Neither one of these references teaches organometallic gels. It is respectfully submitted that the pending claims are patentable over the prior art of record. Applicants request that the Examiner withdraw this rejection and allow the pending claims to issue.

The Examiner additionally rejects claim 30 as being unpatentable over Brancq et al. (U.S. Patent No. 5,422,109), in view of Shechmeister et al. (U.S. Patent No. 3,925,544) and Ganne et al. (FR 2754715). This rejection is deficient for the same reasons as discussed above with respect to Shechmeister et al. Ganne et al. fails to remedy the deficiencies of the Shechmeister et al. Therefore, this rejection should also be withdrawn.

CONCLUSION

The foregoing is intended to be a complete response to the Office Action of October 26, 2007. An indication of allowance of all claims is respectfully solicited. Early notification of a favorable consideration is respectfully requested.

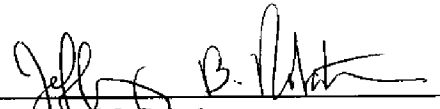
It is believed that no fee is due in conjunction with this response. However, in the event that it is determined that a fee is due in conjunction with this response or to maintain pendency of the application, the Commissioner is authorized to charge any such fee to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

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